REMARKS

Claims 6-7 and 10-12 are pending in the application. Claims 1-5 and 8-9 have been previously cancelled.

Specification

The disclosure is objected to because the claims limitations of the original claims are not contained within the specification.

The Examiner's objection is not understood because Applicants are not aware of such requirements. The claims only need to be supported by the specification, not verbally contained in the specification.

The Examiner has also stated in the second paragraph on page 6 of the Office action that claim numbers cannot appear in the body of the specification.

It is noted that the specification has been amended in an amendment dated 01/03/2006 to remove the reference to claim numbers.

The Examiner has further stated in the second paragraph on page 6 of the Office action that the specification must be amended to include the limitation that the laser beam has substantially constant output for both the welding and the thermal treatment.

It is noted that this limitation is clearly disclosed in paragraphs [00011] and [00012] of the specification.

Claims Rejections – 35 U.S.C. § 103

Claims 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being obvious over Kinsman et al. in view of Baessler et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being obvious over Kinsman et al. and Baessler et al. and further in view of Totsuka et al. (US 5,303,081).

Claims 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being obvious over Uchiumi in view of Kinsman et al. and Baessler et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being obvious over Uchiumi, Kinsman et al. and Baessler et al. and further in view of Totsuka et al.

See Applicants' arguments presented in the response dated 11/27/2006 and the discussion below in the section "Response to Arguments."

Response to Arguments

The Examiner has stated in the third paragraph on page 6 of the Office action that the increasing rate of advance is taught by Baessler et al., that is, increased welding speeds.

It is noted that claim 6 of the instant application recites that during the thermal treatment the laser energy input, based on the radiated surface area and time, is adjusted by increasing the rate of advance. Clearly, this rate of advance refers to thermal treatment, not the welding speed.

The Examiner appears to have ignored applicant's argument that Kinsman et al. do not teach that welding and heating are done by the same single laser beam because in Kinsman et al. the laser beam is split into two: one used for welding and one used for heating a tool.

The Examiner has stated in the last paragraph on page 6 of the Office action that omission of an element with a corresponding omission of a function is within the level of ordinary skill in the art.

It is noted that the tool is omitted (instead of heating the tool which in turn thermally treats a workpiece, in the present invention the laser beam thermally treats the workpiece

directly), but the function (thermal treatment) is retained. Note that the omission of an element and retention of its function is an indicia of unobviousness. *In re Edge*, 359 F.2d 896, 149 USPQ 556 (CCPA 1966). MPEP 2144.04 II B.

The Examiner appears to have ignored applicant's argument that neither Baessler et al. nor Kinsman et al. teach that the length of the time between heating and welding is defined by a cooling of less than 50%.

The Examiner has stated in the second paragraph on page 7 of the Office action that Baessler et al. state a preheat of 100°C, which is at least 10°C.

It is noted that claim 6 recites that laser input is defined by a heating of 10°C of the side of the workpiece opposite to the laser beam. In contrast, in Baessler et al. the edges to be welded are heated to 100°C.

The Examiner has stated in the third paragraph on page 7 of the Office action that Baessler et al. teach that welding is conducted at a constant output (see figure 3).

First, it is not clear how Fig. 3 of Baessler et al. shows that welding is conducted at a constant output because the energy E appears to be increasing with the time. Second, claim 6 of the instant application recites that the laser beam has substantially constant output for both the welding and the heating, not just for welding.

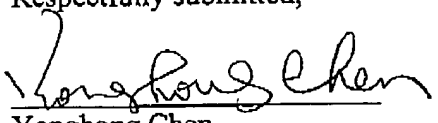
It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 6. Claim 6 is, therefore, believed to be patentable over the art and since all the dependent claims are dependent on claim 6, they are believed to be patentable as well.

Application No: 10/790,383
Response
Reply to Office Action Dated 02/26/2007

Attorney Docket No: 3926.070

Favorable consideration and early issuance of the Notice of Allowance are respectfully requested. **Should further issues remain prior to allowance, the Examiner is respectfully requested to contact the undersigned at the indicated telephone number.**

Respectfully submitted,



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